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# DEPARTMENT OF THE AIR FORCE

JUSTIFICATION OF ESTIMATES FOR FISCAL YEARS 1988/1989  
SUBMITTED TO CONGRESS JANUARY 1987

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Missile Procurement, Air Force

# DEPARTMENT OF THE AIR FORCE

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*see also 24 USC 10122 in the document p. 10*

MISSILE PROCUREMENT, AIR FORCE

For construction, procurement, and modification of missiles, spacecraft, rockets, and related equipment, including spare parts and accessories therefor, ground handling equipment, and training devices; expansion of public and private plants, Government-owned equipment and installation thereof in such plants, erection of structures, and acquisition of land, for the foregoing purposes, and such lands and interests therein, may be acquired and construction prosecuted thereon prior to approval of title; reserve plant and Government and contractor-owned equipment layaway; and other expenses necessary for the foregoing purposes including rents and transportation of things: [\$7,446,718,000] \$9,772,693,000 to remain available for obligation until September 30, [1989] 1990. Further, for the foregoing purposes, \$11,036,102,000 to become available for obligation on October 1, 1988 and to remain available for obligation until September 30, 1991.

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Missile Procurement, Air Force  
Program and Financing in Thousands of Dollars SUMMARY

Identification code	57-3020-0-1-051	Program by activities	Budget plan amounts for PROCUREMENT actions programmed:					Obligations		
			1980 actual	1987 est.	1988 est.	1989 est.	1986 actual	1987 est.	1989 est.	
<b>Direct program:</b>										
00-0101		Ballistic missile	1,100,726	1,149,595	1,316,500	1,540,243	515,200	1,444,030	1,427,770	1,155,745
00-0701		Other missile	2,190,050	2,317,056	3,060,090	7,039,002	2,225,519	1,990,590	2,402,702	2,940,234
00-0801		Modification of inactive missiles	140,301	137,390	169,790	125,709	131,057	136,365	160,727	86,011
00-0901		Spares and repair parts	293,392	391,431	274,110	305,221	500,097	271,712	214,513	156,460
00-0901		Other support	3,037,425	4,154,546	5,015,781	6,224,920	2,524,270	4,000,977	4,040,946	6,261,654
00-9101		Total direct program	7,675,894	8,050,710	9,772,693	11,036,102	6,995,729	7,940,802	9,355,650	10,729,212
01-0101		Reimbursable program	150,460	540,594	106,214	224,952	120,272	602,902	106,214	224,952
10-0001		Total	7,820,134	8,599,312	9,938,907	11,261,055	7,116,011	8,542,905	9,461,872	10,954,165
<b>Financing:</b>										
<b>Offsetting collections from:</b>										
11-0001		Federal funds(-)	-121,047	-503,750	-149,455	-204,707	-120,505	-502,750	-169,455	-204,707
13-0001		Trust funds(-)	-22,593	-40,743	-10,097	-17,990	-20,946	-40,742	-17,990	-17,990
14-0001		Non-Federal sources(-)		-5,093	-1,862	-2,250		-5,092	-1,862	-2,250
17-0001		Recovery of prior year obligations					-260,201			
21-0002		Unobligated balance available, start of year:								
21-0003		Available to finance new budget plans	-02,000	-671,030		-82,800	-82,800	-671,020		
21-0007		Reprogramming from/to prior year budget plans	-400,034	48,400						
22-0001		Unobligated balance transferred to other accounts	-152,512	-849,082		-152,512	-609,062	671,200		
23-0001		Unobligated balance reclassified: Appropriation		671,100			140,049			
23-0002		Reduction pursuant to P.L. 95-177 in unexp bal. Apr	140,049							
24-0002		Unobligated balance available, end of year:								
24-0002		Per completion of prior year budget plans	671,020				2,271,070	2,276,605	3,793,640	4,100,530
24-0002		Available to finance subsequent year budget plans	174,090				431,020			
25-0001		Unobligated balance lapsing					174,090			
39-0001		Budget authority	7,930,132	7,400,710	9,772,693	11,036,102	7,920,122	7,400,710	9,772,693	11,036,102
<b>Budget authority:</b>										
40-0001		Appropriation	7,905,122	7,400,710	9,772,693	11,036,102	7,905,122	7,400,710	9,772,693	11,036,102
41-0001		Transferred to other accounts(-)		-1,000				-1,000		
43-0001		Transferred from other accounts	23,000	3,000			22,000	2,000		
43-0001		Appropriation (adjusted)	7,928,122	7,400,710	9,772,692	11,036,102	7,920,122	7,400,710	9,772,693	11,036,102
<b>Balance of obligations to outlays:</b>										
71-0001		Obligations incurred, net					0,944,561	7,994,291	9,355,650	10,729,212
72-0001		Obligated balance, start of year					7,702,415	0,000,915	0,576,906	10,009,260
73-0001		Obligated balance, end of year					-8,006,915	-8,576,906	-10,009,264	-11,574,076
74-0001		Adjustments in expired accounts					-8,036			
75-0001		Adjustments in unexpired accounts					-260,201			
90-0001		Outlays					6,472,722	7,424,400	7,927,300	9,159,600

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Missile Procurement, Air Force  
Object Classification (in thousands of dollars) SUMMARY

Identification code	37-2010-0-1-001	1986 actual	1987 est.	1988 est.	1989 est.
Direct obligations:					
131.001 Equipment		6,995,739	7,940,003	9,355,650	10,729,212
199.001 Total Direct obligations		6,995,739	7,940,003	9,355,650	10,729,212
Reimbursable obligations:					
231.001 Equipment		120,272	602,902	106,214	224,953
299.001 Total Reimbursable obligations		120,272	602,902	106,214	224,953
999.001 Total obligations		7,116,011	8,542,905	9,541,872	10,954,165

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Missile Procurement, Air Force  
Program and Financing (in thousands of dollars) FISCAL YEAR 1984

Identification code		37-1020-0-1-001		Budget Plan (amounts for PROCUREMENT actions programmed)					Obligations		
				1986 actual	1987 est.	1988 est.	1989 est.	1990 actual	1997 est.	1999 est.	
Program by activities:											
Direct program:											
00.0101	Ballistic missiles								299,761		
00.0201	Other missiles								370,213		
00.0301	Spares and repair parts								29,400		
00.0501	Other support								164,100		
00.0101	Total direct program								890,961		
01.0101	Reimbursable program								5,067		
10.0001	Total								896,020		
Financing:											
Offsetting collections from:											
11.0001	Federal funds(-)								1,469		
12.0001	Trust funds(-)								004		
13.0001	Recovery of prior year obligations								-100,010		
21.0001	Unobligated balance available, start of year:								-1,041,001		
21.0002	Per completion of prior year budget plan:								-29,400		
21.0003	Available to finance new budget plans										
21.0007	Reprogramming from/to prior year budget plans										
22.0001	Unobligated balance transferred to other accounts								125,104		
23.0002	Reduction pursuant to P.L. 99-177 in unob bal: Agn								52,029		
23.0001	Unobligated balance lapsing								174,090		
39.0001	Budget authority										

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Missile Procurement, Air Force  
Program and Financing (in thousands of dollars) FISCAL YEAR 1985

Identification code	17-1010-0-1-001	Program by activity (001)	Budget Plan (amounts for PROCUREMENT actions programmed)				Obligations	
			1986 actual	1987 est.	1988 est.	1989 est.	1986 actual	1987 est.
Direct program								
00.0101		Ballistic missile					2,225	250,202
00.0201		Other missile					427,459	244,050
00.0301		Modification of intercon missile					37,097	10,172
00.0401		Spares and repair parts					158,507	49,615
00.0501		Other support					271,262	26,764
00.9101		Total direct program					897,450	797,604
01.0101		Reimbursable program					9,745	5,220
10.0001		Total					907,195	802,922
Financing								
Offsetting collections from:								
11.0001		Federal funds(-)					-127	
13.0001		Trust funds(-)					763	
14.0001		Non-Federal sources(-)					1	
17.0001		Recovery of prior year obligations					-80,291	
21.0001		Unobligated balance available, start of year:						
21.0002		Per completion of prior year budget plans					-1,757,476	-602,932
21.0003		Available to finance new budget plans					-53,400	-61,600
22.0001		Reprogramming from/to prior year budget plans					-127,003	
23.0001		Unobligated balance transferred to other accounts					50,783	
23.0002		Unobligated balance (reclassified) Appropriation					41,600	
24.0001		Reduction pursuant to P.L. 99-177 in unexp bal: App					88,020	41,600
24.0002		Unobligated balance available, end of year:						
24.0003		Per completion of prior year budget plans					802,932	
24.0004		Available to finance subsequent year budget plans					41,600	
30.0001		Budget authority						

Missile Procurement, Air Force  
Program and Financing (in thousands of dollars) FISCAL YEAR 1986

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Identification code	37-3020-0-1-001	Budget Plan (amounts for PROCUREMENT actions program)				Obligations			
		1986 actual	1987 est.	1988 est.	1989 est.	1986 actual	1987 est.	1988 est.	1989 est.
Program by activities:									
Direct program:									
00.0101	Ballistic missiles	1,100,726				211,302	515,377	302,047	
00.0201	Other missiles	2,190,050				1,519,007	402,041	260,162	
00.0301	Modification of inactive missiles	146,301				74,569	45,191	26,541	
00.0401	Repairs and repair parts	392,792				312,792	50,154	27,656	
00.0501	Other support	3,037,425				3,000,020	522,576	226,021	
00.9101	Total direct program	7,675,694				5,707,320	1,536,139	932,227	
01.0101	Reimbursable program	154,460				105,460	40,900		
10.0001	Total	7,830,154				5,812,780	1,585,119	932,227	
Financing:									
Offsetting collections from:									
11.0001	Federal funds(-)	-131,007				-131,007			
13.0001	Trust funds(-)	-22,593				-22,593			
31.4002	Unobligated balance available, start of year:								
31.4003	For completion of prior year budget plans								
31.4004	Available to finance new budget plans		-630,224				-2,460,946	-932,227	
31.4005	Reprogramming from/to prior year budget plans	-40,400	40,400			-329,400	-47,862		
32.4001	Unobligated balance transferred to other accounts	-329,400	40,400				629,700		
33.4001	Unobligated balance rescinded; Appropriation								
34.4001	Unobligated balance available, end of year:		629,700						
34.4002	For completion of prior year budget plans								
34.4003	Available to finance subsequent year budget plans	630,230				2,460,946	932,227		
39.0001	Budget authority	7,920,132				7,920,132			
Budget authority:									
40.0001	Appropriation	7,905,132				7,905,132			
42.0001	Transferred from other accounts	23,000				23,000			
43.0001	Appropriation (adjusted)	7,928,132				7,928,132			



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Missile Procurement, Air Force  
Program and Financing (in Thousands of Dollars) FISCAL YEAR 1987

Identification code	3/-2020-0-1-001	Budget Plan (amounts for PROCUREMENT actions programmed)				Obligations	
		1986 actual	1987 est.	1988 est.	1989 est.	1986 actual	1987 est.
Program by activities:							
Direct program:							
20.0101	Ballistic missile	1,149,595				670,051	230,500
20.0201	Other missile	2,317,056				1,350,907	467,233
20.0301	Modification of inactive missile	137,290				01,001	41,311
20.0401	Spares and repair parts	291,431				71,944	87,691
20.0501	Other support	4,154,546				2,322,627	623,102
20.0101	Total direct program	8,050,718				5,606,340	1,450,006
21.0101	Nonreimbursable program	540,594				540,594	
10.0001	Total	8,599,312				6,154,934	1,450,006
Financing:							
Offsetting collections from:							
11.0001	Federal funds(-)	-502,750				-502,750	
12.0001	Treat funds(-)	-40,743				-40,743	
14.0001	Non-Federal sources(-)	-5,093				-5,093	
21.0002	Unobligated balance available, start of year:						
22.0001	Per completion of prior year budget plans	-602,000				-602,000	-994,372
14.0002	Unobligated balance transferred from other accounts (-)						
14.0002	Unobligated balance available, end of year:						
14.0002	Per completion of prior year budget plans					2,444,370	994,372
19.0001	Budget authority	7,446,718				7,446,718	
Budget authority:							
10.0001	Appropriation	7,446,718				7,446,718	
11.0001	Transferred to other accounts(-)	-1,000				-1,000	
12.0001	Transferred from other accounts	3,000				3,000	
42.0001	Appropriation (adjusted)	7,446,718				7,446,718	

Missile Procurement, Air Force  
Program and Financing (in thousands of dollars) FISCAL YEAR 1968

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Identification code	57-2020-0-1-051	Budget plus (amounts for procurement actions programmed)				Obligations			
		1966 actual	1967 est.	1968 est.	1969 est.	1966 actual	1967 est.	1968 est.	1969 est.
Program by activity:001									
Direct program:									
00-0101	Ballistic missile			1,316,500			015,134	205,759	
00-0201	Other missile			3,048,400			1,048,267	617,546	
00-0301	Modification of inactive missiles			149,700			92,072	70,487	
00-0401	Spare and repair parts			228,116			137,246	6,127	
00-0501	Other support			5,015,781			3,999,743	760,599	
00-9101	Total direct program			9,772,693			6,973,425	1,662,513	
21-0101	Reimbursable program			106,214			106,214		
10-0001	Total			9,878,907			7,139,639	1,662,513	
Financing:									
Offsetting collections from:									
11-0001	Federal funds(-)			-169,455			-169,455		
13-0001	Trust funds(-)			-10,897			-10,897		
14-0001	Non-Federal sources(-)			-1,062			-1,062		
21-0002	Unobligated balance available, start of year:								
	For completion of prior year budget plans								
24-0002	Unobligated balance available, end of year:								
	For completion of prior year budget plans							-2,799,268	
10-0001	Budget authority (Appropriation)			9,772,693			2,799,268	1,136,755	
							9,772,693		

Missile Procurement, Air Force  
Program and Financing (in thousands of dollars) FISCAL YEAR 1969

05 Jan 67

Identification code	57-2020-8-1-031	Budget plan amounts for PROCUREMENT actions programmed				Obligations			
		1966 actual	1967 est.	1968 est.	1969 est.	1966 actual	1967 est.	1968 est.	1969 est.
Program by activities:									
Direct program:									
00-0101	Ballistic missiles			1,540,243				645,791	
00-0201	Other missiles			1,039,083				1,051,072	
00-0301	Modification of inactive missiles			125,709				43,371	
00-0401	Spares and repair parts			305,331				110,745	
00-0501	Other support			6,224,936				5,393,340	
00-9101	Total direct program			11,036,102				6,072,327	
01-0101	Reimbursable program			224,953				224,953	
10-0001	Total			11,261,055				6,297,280	
Financing:									
Offsetting collections from:									
11-0001	Federal funds(-)			-204,707				-204,707	
12-0001	Trust funds(-)			-17,996				-17,996	
13-0001	Non-Federal sources(-)			-2,250				-2,250	
20-0002	Unobligated balance available, end of year; For completion of prior year budget plans							2,963,775	
40-0001	Budget authority (Appropriation)			11,036,102				11,036,102	

ACTIVITY: 1. Ballistic Missiles

(In Thousands of Dollars)

FY 1989 Estimate	- \$1,540,243
FY 1988 Estimate	- \$1,314,508
FY 1987 Estimate	- \$1,149,595
FY 1986 Actual	- \$1,108,726

SECTION I - PURPOSE AND SCOPE

This activity provides for complete operational intercontinental ballistic missiles, including the airframe structure and installed power units, communications guidance and control equipment, re-entry vehicle (excluding nuclear payloads), instruments and auxiliary equipment installed in the missiles, and penetration aids. It also provides for peculiar support equipment in direct support of operational ballistic missiles including ground guidance and control systems, equipment to maintain the operational status of the system, specialized ground handling equipment, and system trainers. The ground equipment is used to transport, assemble and disassemble, maintain, checkout, launch, and guide ballistic missiles. Specialized training equipment includes system trainers for proficiency training of missile launch and operator crews. This activity also provides for the modernization of the ballistic missile launch and launch control facilities and the integration of new equipment into the launch control center. It includes hardware, training equipment, data and site activation effort required to modernize ballistic missile facilities. Also included is replacement equipment for ballistic missile weapon systems. Replacement equipment requirements provide for peculiar support equipment for out-of-production systems, equipment common to several systems, and equipment required by specialized repair activities.

# SECTION II - JUSTIFICATION OF FUNDS REQUESTED

## PEACEKEEPER

(\$ In Thousands)			
FY 1988		FY 1989	
QTY	AMOUNT	QTY	AMOUNT
21	1,259,949	21	1,359,422

The Peacekeeper is a four-stage ICBM having multiple independently targetable warheads with much greater accuracy than previous ballistic missiles. Present plans are for deployment of the first 50 Peacekeeper missiles in Minuteman silos, and a second 50 missiles in a Rail Garrison basing mode. Peacekeeper subsystems will provide the following improvements over existing Minuteman missiles: an advanced guidance set for improved accuracy; an advanced solid propellant; lightweight motor cases; advanced rocket motor nozzles. Funds are requested in 1988 for procurement of 21 missiles, and associated support equipment. The FY 1989 request is for 21 missiles, and associated support equipment. Of the FY 1989 missiles, 17 are for deployment in rail garrison basing. Full-scale development work on the rail garrison basing mode will begin no later than FY 1988.

## SMALL ICBM

(\$ In Thousands)			
FY 1988		FY 1989	
QTY	AMOUNT	QTY	AMOUNT
-	-	-	121,600

This program provides long term survivability and represents a relatively low value target compared to a larger multiple independently targeted re-entry vehicle. The Small ICBM is a single warhead missile, weighing no more than 37,000 pounds, and having a range of about 6,000 nautical miles. Funds requested in FY 1989 provide for advanced procurement of long leadtime materials and assemblies for guidance and control, and initial training equipment in support of a FY 1990 procurement of 18 missiles.

REPLACEMENT EQUIPMENT - STRATEGIC (BALLISTIC)

(\$ In Thousands)			
<u>FY 1988</u>		<u>FY 1989</u>	
<u>QTY</u>	<u>AMOUNT</u>	<u>QTY</u>	<u>AMOUNT</u>
-	54,559	-	59,221

Replacement equipment includes items to replace peculiar and common support equipment worn out or damaged beyond economical repair and common items required for new ballistic missile systems entering the inventory. It provides for the replacement of organizational and base level missile support equipment.

	<u>FY 1988</u>	<u>FY 1989</u>
Peacekeeper	\$ 709	\$ 921
LGM-30F/G Minuteman II/III	<u>53,850</u>	<u>58,300</u>
TOTAL	\$ 54,559	\$ 59,221

ACTIVITY: 2. Other Missiles

(In Thousands of Dollars)  
FY 1989 Estimate - \$2,839,883  
FY 1988 Estimate - 3,068,490  
FY 1987 Estimate - 2,317,856  
FY 1986 Actual - 2,190,850

SECTION I - PURPOSE AND SCOPE

This activity provides funds for procurement of strategic air-to-ground cruise missiles, tactical ground-to-ground cruise missiles, tactical air-to-air, air-to-ground and ground-to-air missiles, powered bombs, target drones, missile replacement equipment and industrial facilities. Weapon system cost includes flyaway costs (airframe, propulsion equipment, electronics and armament), peculiar support equipment (PSE), system peculiar training equipment and publications, and technical data.

SECTION II - JUSTIFICATION OF FUNDS REQUESTED

The FY 1988 budget request includes funds for the procurement of the Advanced Cruise Missile, Have Flag, Tacit Rainbow, Air-Launched Cruise Missile (ALCM) support equipment, the Ground-Launched Cruise Missile (GLCM), MAVERICK, HARM and AGM-130 powered GBU-15, air-to-ground missiles, RAPIER air base defense missiles, target drones, the SPARROW, SIDEWINDER and Advanced Medium Range Air-to-Air Missile (AMRAAM), missile replacement equipment, and industrial facilities.

Strategic Missiles

Advanced Cruise Missile - Information concerning this program is included in classified Budget documentation material.

Have Flag - Information concerning this program is included in classified Budget documentation material.

Tacit Rainbow - Information concerning this program is included in classified Budget documentation material.

# AGM-86B AIR LAUNCHED CRUISE MISSILE (ALOM)

(\$ In Thousands)			
FY 1988		FY 1989	
QTY	AMOUNT	QTY	AMOUNT
-	2,347	-	1,186

The ALOM is a small, long-range, accurate, nuclear-armed, air-to-ground cruise missile for use on the bomber force. The missile is internally guided by an inertial navigation system that is updated by terrain contour matching radar. The ALOM will expand the lethal footprint of penetrating strategic bomber forces by providing additional target coverage and routing flexibility and by stressing enemy defenses. The FY 1988 procurement funds in the amount of \$2.3 million and \$1.2 million for FY 1989 will provide for peculiar support equipment.

## Tactical Missiles

### AIM-7M SPARROW

(\$ In Thousands)			
FY 1988		FY 1989	
QTY	AMOUNT	QTY	AMOUNT
558	99,462	-	-

The AIM-7M is a rocket propelled, high-reliability, air-to-air and ship-to-air missile equipped with all-weather 360-degree attack capability. The guidance is accomplished through a solid state radar homing system with a dual mode, continuous wave or pulse doppler. Propulsion is provided by a dual thrust solid propellant rocket motor. The missile has a blast-fragmentation warhead. The FY 1988 program in the amount of \$99.5 million for procurement of 558 missiles, will complete USAF procurement of the AIM-7M missile. The remaining War Reserve Material requirements for medium range air-to-air missiles will be met by procurement of AMRAAM.



### AIM-9M SIDEBINDER

(\$ In Thousands)			
FY 1988		FY 1989	
QTY	AMOUNT	QTY	AMOUNT
956	53,051	760	48,046

The AIM-9M is the latest version of heat-seeking, infrared missiles forming the SIDEBINDER family. The AIM-9M is a short-range, air-to-air missile designated to retain all demonstrated guidance performance characteristics of the AIM-9L, while significantly reducing operational limitations of the AIM-9L when used against infrared countermeasures and clutter backgrounds. The FY 1988 program in the amount of \$53.1 million is for procurement of 956 missiles. The FY 1989 program procures 760 missiles for \$48.0 million. These missiles will increase the USAF inventory of the preferred AIM-9M missile toward the War Reserve Material objective. Additionally, these missiles will replace AIM-9L's currently allocated to air superiority missions. The AIM-9L's are required to provide self-defense for the A-7, A-10, F-4 and F-111 aircraft.

### AGM-130 Powered GBU-15

(\$ In Thousands)			
FY 1988		FY 1989	
QTY	AMOUNT	QTY	AMOUNT
121	43,754	235	92,301

The AGM-130 is a product improvement to the GBU-15 that increases the standoff range while preserving the GBU-15 high terminal accuracy and expands payload capacity. The AGM-130 uses a unitary warhead (MK-84, 2,000 lb). The guidance system for the AGM-130 remains the television (TV) or imaging infrared (IIR) seeker of the GBU-15. The intent is to maximize use of existing GBU-15 production hardware to minimize production costs. In FY 1988 the Air Force is requesting \$43,754 million for the procurement of 121 AGM-130 powered GBU-15 weapons. Funds for FY 1989 in the amount of \$92,301 million procure 235 weapons.

#### AGM-65D/G MAVERICK

(\$ In Thousands)			
FY 1988		FY 1989	
QTY	AMOUNT	QTY	AMOUNT
2,100	354,605	1,900	359,139

The AGM-65D and G missiles are rocket-propelled, air-to-surface, precision-guided tactical missiles with a "stand-off" launch and leave capability. The missiles are guided by tracking signals developed from the naturally occurring thermal energy of the target. The AGM-65D has a (125 lb) conical shaped charge warhead, which is detonated by a contact fuze mechanism. The AGM-65G is essentially the same as the "D" version only it employs a larger (300 lb) high explosive warhead. Both the AGM-65D and G missiles incorporate imaging infrared guidance compatible with all TV MAVERICK capable aircraft and target acquisition systems that are being planned for tactical aircraft. The FY 1988 procurement request in the amount of \$354.6 million is for production of 2,100 MAVERICK missiles from both the primary contractor and second manufacturer. In FY 1989, the Air Force will begin the first year of a four year Multiyear Contract for a total of 13,800 missiles to be procured over FY 1989-FY 1992. The multiyear contract will be competed for between the primary contractor and the second producer, winner-take-all. The FY 1989 request of \$359.1 million buys 1,900 missiles and includes \$108.6 million of advance procurement funds for the multiyear program.

#### AGM-88A HARM

(\$ In Thousands)			
FY 1988		FY 1989	
QTY	AMOUNT	QTY	AMOUNT
1,748	422,925	893	214,914

The Advanced High-Speed Anti-Radiation Missile (HARM) is an air-to-surface missile that is guided to enemy radar sites by homing in on emitting signals. HARM characteristics include software flexibility, inflight retargeting, high speed, large launch envelope, wide band coverage in a single head, high sensitivity and compatibility with both Air Force and Navy tactical aircraft. The increased sophistication, concentration and lethality of enemy ground based, radar guided, missile and anti-aircraft artillery systems threaten the ability of tactical aviation to accomplish its mission and survive. HARM provides a lethal counter to this threat. In FY 1988, 2,514 HARM missiles will be procured - 766 missiles for the Navy and 1,748 missiles for the Air Force. The FY 1989 Air Force program of \$214.9 million procures 893 missiles.

# RAPIER

(\$ In Thousands)			
FY 1988		FY 1989	
QTY	AMOUNT	QTY	AMOUNT
-	31,200	-	11,000

RAPIER is a low-level, surface-to-air weapon system specifically designed to combat modern low-flying aircraft. RAPIER is manufactured by British Aerospace under contract to the United Kingdom Ministry of Defense. A RAPIER fire unit consists of a launcher with four missiles, an optical tracker, a radar tracker, and auxiliary power equipment. The UK program, funded incrementally, provides for 32 fire units, and related support equipment. The FY 1988 and FY 1989 program funding will procure 14 fire units and associated equipment for protection of two U.S. bases in Turkey.

## Advanced Medium Range Air-to-Air Missile (AMRAAM)

(\$ In Thousands)			
FY 1988		FY 1989	
QTY	AMOUNT	QTY	AMOUNT
630	832,882	1750	875,036

The AMRAAM is an air-to-air missile with significant improvements in operational utility and combat effectiveness over the AIM-7F/M Sparrow missile. It is a radar guided, all-weather, all-environment, beyond-visual-range, air-to-air missile compatible with the F-14, F-15, F-16 and F-18. It will have a performance envelope significantly improved over the AIM-7F/M, increased missile velocity, a "launch and maneuver" employment capability, and the capability for multiple target attack during a single intercept. The FY 1988 request in the amount of \$832.9 million buys 630 missiles. The Navy has budgeted its initial AMRAAM procurement funds in FY 1988. The FY 1987 and FY 1988 buys are designed to build up both the leader and the follower contractor's monthly production rate to prepare them for head to head competition in FY 1989. The FY 1989 funding request is for lot III production of 1750 missiles (first lot for competition) and continuation of the productivity enhancement program.

BGM 109 GROUND LAUNCHED CRUISE MISSILE (GLOM)

(\$ In Thousands)			
FY 1988		FY 1989	
QTY	AMOUNT	QTY	AMOUNT
37	70,792	-	10,900

The GLOM is a small, long-range, all-weather, accurate, ground-to-ground cruise missile. A GLOM mobile flight is comprised of four transporter erector launchers, which each carry four missiles, and two launch control centers. GLOM will improve our deterrent posture by increasing our non-strategic nuclear capability. GLOM will provide increased fire-power and flexibility to non-strategic nuclear forces by releasing nuclear alert aircraft for conventional tasking and by improving non-strategic nuclear force pre-launch survivability. The FY 1988 funds in the amount of \$70.8 million are for the procurement of 37 TOMAHAWK missiles provide for an economical procurement quantity from the two competing producers, General Dynamics and McDonnell Douglas. The FY 1988 buy is needed to meet total inventory requirements.

Target Drones

(\$ In Thousands)			
FY 1988		FY 1989	
QTY	AMOUNT	QTY	AMOUNT
48	11,040	58	26,842

Target drones are remotely piloted vehicles used to simulate threat aircraft during test and evaluation of air-to-air missiles. Both full-scale and subscale targets with associated augmentation, scoring and countemeasures devices are required. Funds in the amount of \$11.0 million requested for FY 1988 will provide for the procurement of 48 subscale target drones. The FY 1989 request for \$26.8 million will buy 58 full-scale (QF-106) target drones. This is the first year of QF-106 production which continues the procurement of full-scale drones. The QF-100 had previously satisfied full-scale target requirements, with final procurement in FY 1987 when the supply of F-100 aircraft for conversion was depleted.

### Industrial Facilities

(\$ In Thousands)			
FY 1988		FY 1989	
QTY	AMOUNT	QTY	AMOUNT
-	13,517	-	15,998

These requirements represent the Air Force's effort, in cooperation with industry, to ensure the defense industrial base is capable of producing peacetime weapon systems in a cost-effective and efficient manner. Industrial facilities includes the missile/space sector segment of an industrial base program that ensures the ability of the base to accelerate deliveries in times of national emergencies in order to meet sustainability requirements. It includes funding for a broad range of industrial acquisition tools that also dramatically impact peacetime procurement. Modernization, productivity, the operations at the 13 government owned-contractor operated plants and at hundreds of civilian contractor locations that all make up the defense industrial base are becoming a more and more essential ingredient to national deterrence. Studies by the Services and the Joint Chiefs of Staff have repeatedly proven that the industrial base will not support mobilization demands in a timely manner without some advance analysis and preparation. In FY 1988 and FY 1989, \$13.5 million and \$16.0 million are required to support facilities projects, industrial base planning, and industrial productivity and responsiveness.

### Replacement Equipment

(\$ In Thousands)			
FY 1988		FY 1989	
QTY	AMOUNT	QTY	AMOUNT
-	7,610	-	13,058

Requirements for replacement equipment provide for peculiar support equipment for weapon systems that are no longer in production, equipment common to several systems, and equipment required by specialized report activities. In FY 1988 and FY 1989 the funding is required to procure replacement equipment for the AIM-7 SPARROW, AIM-9 SIDEMINDER, AGM-65A MAVERICK, AGM-69A SRAM, HARPOON, ALOM and GLOM programs.

ACTIVITY: 3. Modification of In-service Missiles

(In Thousands of Dollars)

FY 1989 Estimate	-	\$125,709
FY 1988 Estimate	-	149,798
FY 1987 Estimate	-	137,290
FY 1986 Actual	-	146,301

SECTION I - PURPOSE AND SCOPE

This activity provides for modification of missile systems and drones, direct ground support equipment, missile training equipment, and components for this equipment. These costs include modification kits, revised handbooks, and engineering effort. These programs are designed to improve reliability, enhance performance, and increase maintainability by incorporating approved modifications resulting from technical advances, service use, and continuing test programs.

SECTION II - JUSTIFICATION OF FUNDS REQUESTED

The FY 1988 and FY 1989 missile modification program consists of Class IV modifications necessary for safety improvements, extension of service life or correction of material deficiencies, and Class V modifications that incorporate changes to enhance the operational capability of the fielded systems. Several Class III update modifications are also programmed to bring fielded missiles into line with production line configuration. Advances in technology and weapon system service life extensions necessitate the modification of in-service missile systems to enable strategic, tactical, and support forces to maintain superiority over hostile forces.

Advanced Cruise Missile Modification.

This is a classified program requiring special access. Details are included in other budget documentation.

Classified Programs Modification.

These are classified programs requiring special access. Details will be provided through other budget documentation.

LGM-30 Minuteman III/IIII Modification.

	(\$ In Thousands)
FY 1988	
\$119,223	
	FY 1989
	\$77,746

The FY 1988 program provides \$119.2 million for Minuteman Class IV and V modifications. Major Class IV efforts include the continuation of work begun in FY 1983 to insure logistics support of the Minuteman II guidance set, and an effort to correct severe corrosion in the critical, hardened, ground launch cable system. Included also is the initiation of two larger modifications, one to enhance hardness grounding to enable the Minuteman to better survive a nuclear attack and subsequent Electro-Magnetic Pulse (EMP) generations, and another to install special storage containers in the Launch Control Centers to prevent personnel injury and equipment damage in the case of earth tremors, as well as three small trainer modifications.

The FY 1989 program request is \$77.7 million for Minuteman Class IV and V modifications. One Class V modification, the Groundwave Emergency Network (GAEN) for the Minuteman launch control centers, is planned for initiation in FY 1989. On-going Class IV modifications include the final year of the Minuteman II guidance set modification, and continuation of the Splice Case and Launch Control Facility (LCF) EMP Hardness Protection modifications.

AGM-88A, HARM Modification.

	(\$ In Thousands)
FY 1988	
\$2,245	
	FY 1989
	\$2,200

The FY 1988 program provides \$2.2 million and the FY 1989 \$2.2 million to correct deficiencies revealed during operational testing and initial use. These corrections are incorporated into the production line at the earliest time, while update modifications correct those deficiencies on delivered systems or systems that could not be corrected while in production.

AFM-86A, Air Launched Cruise Missile Modification.

	(\$ In Thousands)
FY 1988	
\$7,381	
	FY 1989
	\$11,355



The FY 1988 program provides \$7.4 million for ALOM update (Class III) modifications, Class V and Class IV modifications. The update modifications correct deficiencies revealed during operational testing and initial use, and the ALOM Class V modification provides for the procurement of kits to make ALOM support equipment compatible with the new B-52H common strategic rotary launcher (CSRL). A major Class IV modification to correct a performance anomaly in the inertial navigation (INE) system to allow launch of the ALOM in the inverted position is initiated in FY 1988.

The FY 1989 program requests \$11.4 million to continue Class III, IV and V modifications initiated previously.

BGM-109, Ground Launched Cruise Missile Modification.

	(\$ In Thousands)
FY 1988	<u>FY 1989</u>
\$15,400	\$17,136

The FY 1988 program provides \$15.4 million for GLOM Class III and IV modifications to correct material deficiencies identified as the system was fielded and to update the configuration baseline so that a common configuration is fielded for logistics support compatibility. Included is the initiation of a guidance system update Class IV modification.

The FY 1989 program request of \$17.1 million is to continue on-going Class IV modifications and to initiate a Class IV modification to correct engine deficiencies revealed since the missile became operational.

Peacekeeper Modifications.

	(\$ In Thousands)
FY 1988	<u>FY 1989</u>
\$1,311	\$1,733

The FY 1988 and FY 1989 programs provide \$1.3 million and \$1.7 million, respectively, for miscellaneous Class IV reliability and maintainability modifications.

Other (Modifications Under \$2.0 Million).

	(\$ In Thousands)
FY 1988	<u>FY 1989</u>
\$232	\$198

The FY 1988 and FY 1989 programs provide \$.2 million, respectively, for miscellaneous Class IV modifications on the AIM-7F SPARROW, to improve reliability, maintainability and correct material deficiencies.



ACTIVITY: 4. Spares and Repair Parts

(In Thousands of Dollars)  
FY 1989 Estimate - \$305,331  
FY 1988 Estimate - 224,116  
FY 1987 Estimate - 291,431  
FY 1986 Actual - 392,392

SECTION I - PURPOSE AND SCOPE

This activity provides for procurement of initial and replenishment spares and repair parts for ballistic missiles, other missiles, target drones. Included are related provisioning documentation and spares for missile modification programs, peculiar support equipment and training equipment.

SECTION II - JUSTIFICATION OF FUNDS REQUESTED

The funds for FY 1988 and FY 1989 are required for initial spares for weapon systems in production and for replenishment spares to maintain and test existing weapon systems. Initial spares funding requirements are determined by applying standard factors which are based on historical experience. The factors are applied in accordance with type of weapon system, category of support (e.g. air vehicle, support equipment), number of weapon systems in production, production leadtimes, and recurring flyaway costs. Initial spares requirements are validated in the weapon system provisioning process for a specified support period. Replenishment spares include components and repair parts required for the continued support of missiles, drones and related support equipment maintained in the operational inventory. Requirements for replenishment spares are based on a computational process which utilizes actual consumption, leadtime, on hand inventory, procurement cost, and weapon system program data. Through management review, the results are adjusted as appropriate to reflect any changes in support requirements. Included within replenishment spares are such items as replacement ballistic missile motors, ballistic missile reentry vehicles for operational testing and evaluation, tactical missile telemetry packs for weapon system evaluation, and guidance and control units for all categories of missiles.

INITIAL SPARES

	<u>FY 1986</u>	<u>FY 1987</u>	<u>FY 1988</u>	<u>FY 1989</u>
AIM-9L Sidewinder	-	403	39	18
AIM-120- Advanced Medium				
Range Air-to-Air Missile (AMRAAM)	-	2,908	4,124	5,740
AGM-65D Imaging Infrared (IIR) Maverick	591	4,720	9,104	9,804
AGM-86 Air Launched				
Cruise Missile (ALOW)	2,002	-	-	-
AGM-88A High Speed				
Anti Radiation Missile (HARM)	2,658	10,008	9,261	6,660
AGM-130 Powered GBU-15	-	648	1,007	1,564
BGM-109 Ground Launched				
Cruise Missile (GLOM)	3,741	6,948	6,514	156
LGM-118A Peacekeeper	103,699	53,709	16,935	1,663
Target Drones	340	625	315	304
Classified Programs	<u>52,071</u>	<u>47,878</u>	<u>9,567</u>	<u>37,971</u>
Subtotal	165,102	127,847	56,866	63,880

MODIFICATION INITIAL SPARES

AIM-9 SIDEWINDER	220	243	248	254
LGM-30 F/G MINUTEMAN III/III	11,726	6,294	688	2,988
OTHER PROGRAMS	<u>1,748</u>	<u>928</u>	<u>2,242</u>	<u>2,143</u>
SUBTOTAL	<u>13,694</u>	<u>7,465</u>	<u>3,178</u>	<u>5,385</u>
TOTAL INITIAL SPARES	178,796	135,312	60,044	69,265

REPLENISHMENT SPARES

	<u>1986</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>
AIM-4 /GAR-2B	353	-	-	-
AIM-7 Sparrow	3,610	6,463	3,324	3,434
AIM-9 Sidewinder	9,584	10,867	10,326	11,646
AIM-120 AMRAAM	-	-	1,841	5,410
AGM-65 Maverick	6,578	17,139	5,934	2,506
AGM-69A Short Range Attack Missile (SPAM)	2,745	2,486	2,519	1,015
AGM-84 Harpoon	-	3,002	1,000	1,000
AGM-86 ALOM	17,659	14,854	10,855	5,274
AGM-88A HARM	4,748	164	2,699	2,299
BGM-109 GLOM	35,021	13,275	4,829	2,950
RAPIER	1,834	6,596	9,900	14,900
LGM-30 MINUTEMAN	129,371	69,616	91,440	135,895
LGM-118A Peacekeeper	-	10,463	18,279	27,319
AGM/BQM-34 Firebee	1,170	322	74	35
TARGET DRONES				
(MQM-107 and QF 100)	197	872	1,052	983
CLASSIFIED PROGRAM*	726	-	-	21,400
Total Replenishment Spares	213,596	156,119	164,072	236,066
TOTAL BUDGET ACTIVITY 4: SPARES AND REPAIR PARTS	392,392	291,431	224,116	305,331

ACTIVITY: 5. Other Support

(In Thousands of Dollars)  
FY 1989 Estimate - \$6,224,936  
FY 1988 Estimate - 5,015,781  
FY 1987 Estimate - 4,154,546  
FY 1986 Actual - 3,837,425

SECTION I - PURPOSE AND SCOPE

This activity provides for space programs and special programs. Space programs provide launch vehicles, space vehicles, peculiar ground support equipment, and miscellaneous launch support requirements other than those chargeable to the Operations and Maintenance appropriation. Special programs are of a sensitive nature and require special access.

SECTION II - JUSTIFICATION OF FUNDS REQUESTED

The FY 1988 budget request of \$5,015,781 includes \$1,483,609 for operational space programs and \$3,532,172 for special programs. The FY 1989 request of \$6,224,936 includes \$1,726,689 for operational space programs and \$4,498,247 for special programs.

Communications Security (COMSEC)

(\$ In Thousands)			
FY 1988		FY 1989	
QTY	AMOUNT	QTY	AMOUNT
-	23,682	-	37,035

This program provides communications security equipment for all critical spaceborne communications systems. Funds requested in this line procure COMSEC products for use in operational space programs. This program is an integral part of the national COMSEC program administered by the National Security Agency. FY 1988 and FY 1989 funds provide for the procurement of peculiar anti-jam, data and command authentication encryption/decryption, authentication anti-jam, and weapon system security communication equipment for space and satellite programs.

Navstar Global Positioning System (GPS) (MYP)

(\$ In Thousands)			
FY 1988		FY 1989	
QTY	AMOUNT	QTY	AMOUNT
4	92,605	-	61,217

The operational Navstar GPS will consist of 18 (+3 on orbit spares) satellites in six orbital planes, a ground control station and approximately 20,000 sets of user equipment for all services. Users (military aircraft, ships, ground vehicles, and ground personnel) will be able to precisely determine position (to 16 meters spherical probable accuracy worldwide) and velocity (.1 meters per second), in three dimensions and unimpaired by weather anywhere in the world. GPS's positional accuracy will significantly improve the effectiveness of reconnaissance, weapons delivery, mine countermeasures and rapid deployment for all services. The FY 1988 funds requested complete the 28 satellite multiyear procurement, fully funding four satellites. The FY 1989 request provides for modification of satellites and ground support equipment to use the medium launch vehicle.

Space Shuttle Operations (Formerly Space Launch Support) (MYP)

(\$ In Thousands)			
FY 1988		FY 1989	
QTY	AMOUNT	QTY	AMOUNT
-	108,051	-	83,887

The Space Shuttle Operations program provides funds for production of Inertial Upper Stage (IUS), Payload Assist Modules-Delta class (PAM-D), a competed upper stage, and spares to support Air Force operational space programs (excluding Special Missions) launched on the Space Shuttle. Operational programs include Defense Support Program, Defense Satellite Communications System, and Navstar Global Positioning System (GPS)/ Nuclear Detonation (NUDET) Detection System (NDS). Funds requested in FY 1988 will be used to procure four PAM-D II upper stages for GPS. It also procures necessary spares for the IUS, and IUS hardware support. In FY 1989, funds are requested for advance procurement for competed upper stages, support equipment for Shuttle operations at Kennedy Space Center, and necessary spares for the IUS.

Defense Meteorological Satellite Program (DMSP) (MYP)

(\$ In Thousands)			
FY 1988		FY 1989	
QTY	AMOUNT	QTY	AMOUNT
-	97,446	2	212,113

DMSP is an advanced weather satellite system that provides timely, worldwide, high quality visible and infrared cloud imagery and other specialized meteorological, oceanographic and solar geophysical data to support DOD strategic missions. Worldwide data are provided to the Air Force Global Weather Central (Offutt AFB, Nebraska) and the Navy's Fleet Numerical Oceanography Center (Monterey, California). Local area cloud imagery data are transmitted for immediate use directly from the satellites to fixed and mobile Air Force and Navy tactical receiving terminals at key worldwide operating locations and onboard aircraft carriers at sea. FY 1988 AND FY 1989 funding supports initiation of multiyear contracts for procurement of a total of five DMSP satellites and primary cloud imaging sensors. Full funding for two satellites is included in FY 1989 and funding for two sensors is included in FY 1988 as advance procurement. The funding request also includes various mission sensors and engineering support.

Defense Support Program (DSP) (MYP)

(\$ In Thousands)			
FY 1988		FY 1989	
QTY	AMOUNT	QTY	AMOUNT
1	391,843	2	488,787

DSP satellites contain sensors which provide near real-time data to the National Command Authority and other designated users. Funds are requested in FY 1988 to procure the first of five satellites to be procured under a multiyear procurement program initiated with FY 1987 advance procurement funds. Funds are requested in FY 1989 to procure an additional 2 satellites under the continuing multiyear procurement.

Defense Satellite Communications System (DSCS) (MYP)

(\$ In Thousands)			
FY 1988		FY 1989	
QTY	AMOUNT	QTY	AMOUNT
1	75,870	-	21,105

DSCS provides Super High Frequency (SHF) satellite communications for secure voice and high data rate transmissions. It satisfies unique and vital national security communications requirements for worldwide military command and control, crises management and relay of intelligence, early warning data, treaty monitoring and surveillance information and diplomatic traffic. The DSCS program consists of a space segment, which is an Air Force responsibility, a multi-user terminal segment for ground, airborne, and (Continued)

naval elements, and an operational control segment. The authorized DSCS space segment consists of five operational and two on-orbit spare satellites positioned in geosynchronous orbits to provide global (less polar) coverage. Existing DSCS II satellites will be replenished with DSCS III satellites. DSCS III provides increased capacity, flexibility, and counter-measure capability. DSCS III satellites will include an Air Force Satellite Communications System single channel transponder for Emergency Action Message dissemination. Production of the first two satellites of a multiyear procurement of seven satellites was fully funded in FY 1985 with production programed at an optimum rate of two per year. Funding in FY 1988 continues satellite production fully funding the seventh spacecraft, launch vehicle integration and General System Engineering/Integration Support. Funding in FY 1989 provides for satellite modifications and storage costs.

#### Space Boosters (MYP)

(\$ In Thousands)			
FY 1988		FY 1989	
QTY	AMOUNT	QTY	AMOUNT
9	474,412	3	253,906

The Space Boosters program provides access to space for critical DOD payloads. FY 1988 provides for procurement of four Titan IV expendable launch vehicles that will be capable of launching 10,000 pound satellites into geosynchronous orbits, and procurement of parts required to modify five Titan II's to space launch vehicle configuration. These systems will be used along with the Space Shuttle for providing an assured access to space for selected DOD spacecraft. The Titan IV effort is a multiyear production program designed to acquire thirteen launch vehicles. FY 1989 program funds an additional three Titan IV's.

#### Space Defense System

(\$ In Thousands)			
FY 1988		FY 1989	
QTY	AMOUNT	QTY	AMOUNT
*	21,800	*	364,539

This program funds acquisition of the US antisatellite (ASAT) weapon system. ASAT is composed of a miniature vehicle (MV) final stage designed to destroy a target satellite, a two-stage SRAM/ALTAIR missile to boost the MV to target altitude, and a modified air defense F-15 to launch the missile. The FY 1988 request contains advance procurement funds only. FY 1989 funds continue the production program.

\* Quantity is provided in classified Budget documentation.

Medium Launch Vehicle (MLV)

(\$ In Thousands)			
FY 1988		FY 1989	
QTY	AMOUNT	QTY	AMOUNT
4*	197,900	4*	204,100

This program provides for competitive procurement of medium launch vehicles (MLV's). The MLV will be used to launch mediumweight satellites, such as the NAVSTAR GPS into orbit. The FY 1988 request provides for procurement of four MLV's. The FY 1989 request provides for the procurement of an additional four MLV's.

\* The MLV contract was awarded 21 January 1987 to McDonnell Douglas. The contract provides for the procurement of 6 MLV's in FY 1987, with options to buy 7 in FY 1988 and 6 in FY 1989 with funds requested.



COMPARISON OF FY 1987 PROGRAM REQUIREMENTS AS REFLECTED  
IN FY 1987 BUDGET WITH FY 1987 PROGRAM REQUIREMENTS AS  
SHOWN IN FY 1988 BUDGET

SUMMARY OF PROGRAM REQUIREMENTS

BUDGET ACTIVITY	(In Thousands of Dollars)		Increase (+) or Decrease (-)
	Program Requirements Per 1987 Budget	Program Requirements Per 1988 Budget	
1. Ballistic Missiles	\$ 1,487,827	\$ 1,149,595	\$ -338,232
2. Other Missiles	3,054,563	2,317,866	-736,727
3. Modification of In-Service Missiles	146,527	137,290	-9,237
4. Spares and Repair Parts	334,166	291,431	-42,735
5. Other Support	3,969,297	4,154,546	+185,249
Reimbursable Program	<u>324,600</u>	<u>548,594</u>	<u>+223,994</u>
Total Fiscal Year Program	\$ 9,307,000	\$ 8,599,312	\$ -707,688

EXPLANATION BY BUDGET ACTIVITY

1. Ballistic Missiles (\$-338,232). Congress reduced the Peacekeeper program by \$303,400 thousand. In addition, Replacement Equipment-Strategic was reduced \$1,000 thousand and allocation of the Congressional undistributed reduction was \$33,832 thousand.
2. Other Missiles (\$-736,727). Congress made the following adjustments: AIM-7 (\$-7,347), AIM-9 (\$-54,436), AGM-130 (\$-11,100), Maverick (\$-199,500), HARM (\$-119,000), AFRAM (\$-150,000), GLOM (\$-12,900), Replacement Equipment (\$-705), and Classified Program (\$-116,673). Additional adjustments include Environmental Restoration (\$-3,000) and the allocation of Congressional undistributed reductions (\$-68,066).
3. Modification of In-Service Missiles (\$-9,237). Congress reduced the Minuteman program by \$5,200 thousand and the allocation of the Congressional undistributed reductions was \$4,037 thousand).
4. Spares and Repair Parts (\$-42,735). Congress reduced the FY 1987 Spares and Repair Parts \$34,166. The allocation of the Congressional undistributed reduction was \$8,569.
5. Other Support (\$+185,249). The increase is a net result from a Congressional reduction of \$406,751 thousand and a reprogramming increase of \$602,000 thousand for Space Launch Recovery. Congress reduced the following programs: COMSEC (\$-5,000), NAVSTAR GPS (\$-4,565), Space Shuttle Operations (\$-29,952), DSP (\$-72,200), DBCS (\$-10,000), Space Boosters (\$-75,047), Space Defense System (\$-28,481), Special Programs (\$-84,700), and Special Update Programs (\$-44,300). In addition, the allocation of the Congressional undistributed reduction was \$52,486 thousand. The Space Launch Recovery increase adjusted the following programs: NAVSTAR GPS (\$+15,500), Space Shuttle Operations (\$+9,500), DBCS (\$+1,000), Space Boosters (\$+69,000), and Special Programs (\$+117,000).

Reimbursable Program Increase is for anticipated reimbursement from Navy for Maverick missile.

COMPARISON OF FY 1987 FINANCING AS REFLECTED  
IN FY 1987 BUDGET WITH FY 1987 FINANCING AS  
SHOWN IN THE FY 1988 BUDGET

	Financing Per FY 1987 Budget	(In Thousands of Dollars) Financing Per FY 1988 Budget	Increase (+) or Decrease (-)
Program Requirements	\$ 9,307,000	\$ 8,599,312	\$ -707,688
Program Requirements (Service Account)	(8,982,400)	(8,050,718)	(-931,682)
Program Requirements (Reimbursable)	(324,600)	(548,594)	(+223,994)
Less:			
Anticipated Reimbursements	324,600	548,594	+223,994
Unobligated Balance from Other Accounts	-	602,000	+602,000
Transfer from Other Accounts	-	3,000	+3,000
Add:			
Transfers to Other Accounts	-	1,000	+1,000
Unobligated Balance to Other Accounts	-	-	-
Appropriation	\$ 8,982,400	\$ 7,446,718	-1,535,682

EXPLANATION OF CHANGES IN FINANCING

The fiscal year 1987 program has decreased \$707,688 thousand since submission of the FY 1987 budget. Adjustments by category are explained below:

1. Anticipated Reimbursements. The increase of \$234,994 thousand is due to an anticipated increase in customer orders.
2. Unobligated Transfer from Other Accounts. An amount of \$602,000 thousand is being applied to the Space Launch Recovery effort in accordance with the FY 1987 Appropriations Act and FY 1986 Urgent Supplemental.
3. Transfer from Other Accounts. An amount of \$3,000 thousand was added as part of the Environmental Restoration program.
4. Transfer to Other Accounts. An amount of \$1,000 thousand has been identified for transfer from the Missile Procurement Appropriation to the Aircraft Procurement appropriation.
5. Appropriation. A decrease of \$1,535,682 thousand results from Congressional adjustments to the FY 1987 Budget request.

COMPARISON OF FY 1986 PROGRAM REQUIREMENTS AS REFLECTED  
IN FY 1987 BUDGET WITH FY 1986 PROGRAM REQUIREMENTS AS  
SHOWN IN FY 1988 BUDGET

SUMMARY OF PROGRAM REQUIREMENTS

	Program Requirements Per 1987 Budget	(in Thousands of Dollars) Program Requirements Per 1988 Budget	Increase (+) or Decrease (-)
<b>BUDGET ACTIVITY</b>			
1. Ballistic Missiles	\$ 1,739,901	\$ 1,108,726	\$ -631,175
2. Other Missiles	2,309,945	2,190,850	-119,095
3. Modification of In-Service Missiles	155,645	146,301	-9,344
4. Spares and Repair Parts	441,670	392,392	-49,278
5. Other Support	3,669,881	3,837,425	+167,544
Reimbursable Program	<u>255,500</u>	<u>154,440</u>	<u>-101,060</u>
Total Fiscal Year Program	\$ 8,572,542	\$ 7,830,134	\$ -742,408

EXPLANATION OF CHANGES BY BUDGET ACTIVITY

- Ballistic Missiles (\$-631,175) Congress rescinded \$443.2 million from the FY 1986 Peacekeeper Program in the FY 1987 Appropriation Act. Additional reductions of \$188.0 million resulted from Gramm-Rudman-Hollings (\$96.2) and the allocation of a Congressional undistributed reduction (\$91.8).
- Other Missiles (\$-119,095) The reduction is a net result of the following adjustments: Gramm-Rudman-Hollings (\$-126,787), allocation of a Congressional undistributed reduction (\$38,770), a reprogramming to a Classified Program (\$+48,400) and other minor adjustments (\$-1,938).
- Modification of In-Service Missiles (\$-9,344) The reduction results from the following adjustments: Gramm-Rudman-Hollings (\$-8,332), and allocation of a Congressional undistributed reduction (\$-1,012).

4. Spares and Repair Parts (\$49,278). The reduction results from the following adjustments: Gramm-Rudman-Hollings (\$-24,442), allocation of a Congressional undistributed reduction (\$-24,900), and other minor adjustments (\$+64).
5. Other Support (\$+167,544). The net increase results from the following adjustments: Gramm-Rudman-Hollings (\$-151,564), allocation of a Congressional undistributed reduction (\$-29,992), a supplemental adjustment to Special Programs (\$+16,000) and Space Launch Recovery Program (\$+329,400), and other minor adjustments (\$+3,700).

Reimbursable program decreases because customer orders were less than anticipated.

COMPARISON OF FY 1986 FINANCING AS REFLECTED  
IN FY 1987 BUDGET WITH FY 1986 FINANCING AS  
SHOWN IN FY 1988 BUDGET

	Financing Per FY 1987 Budget	(In Thousands of Dollars) Financing Per FY 1988 Budget	Increase (+) or Decrease (-)
Program Requirements	\$8,572,542	\$7,830,134	\$-742,408
Program Requirements (Service Account)	(8,317,042)	(7,675,694)	(-641,348)
Program Requirements (Reimbursable)	(255,500)	(154,440)	(-101,060)
Less:			
Anticipated Reimbursements	255,500	154,440	-101,060
Transfer from Other Accounts	8,300	71,400	+63,100
Unobligated Balance from Other Accounts	-	329,400	+329,400
Add:			
Unobligated to Finance Subsequent year budget plans	-	630,238	+630,238
Transfer to Other Accounts	3,700	-	-3,700
Appropriation	\$8,312,442	\$7,905,132	\$-407,310

EXPLANATION OF CHANGES IN FINANCING

The FY 1986 program has decreased \$742,408 thousand since submission of the FY 1987 Budget. Adjustments by category of financing are explained below:

1. Anticipated Reimbursements. An decrease of \$101,060 thousand is due to decreases in anticipated customer orders.
2. Transferred from Other Accounts. An increase of \$63,100 thousand results from transfers from Aircraft Procurement Appropriation and Other DOD accounts to the Missile Procurement Appropriation
3. Unobligated Balance from Other Accounts. The increase of \$329,400 thousand results from the FY 1986 portion of the Space Launch Recovery Program as approved in the FY 1986 Urgent Supplemental..

4. Unobligated Balance Available to Finance Subsequent Year Budget Plans. The increase of \$630,238 thousand results from Congressional action on the FY 1986 program in the FY 1987 Appropriation Act (\$629,700 thousand) and an anticipated reprogramming action from the Missile Procurement Appropriation of \$538 thousand to satisfy pay increase requirements.
5. Transferred to Other Accounts. A decrease of \$3,700 thousand is due to an anticipated reprogramming from the Missile Procurement Appropriation to the RDT&E Appropriation that did not occur.
6. Appropriation. A decrease of \$407,310 thousand results from Gramm-Rudman-Hollings adjustments to the FY 1986 Appropriation.

1 COMPONENT USAF		FY 19 <sup>88</sup> FACILITY PROJECT DATA		2 DATE 17 JUL 86	
3 INSTALLATION AND LOCATION AFP 78 Morton Thiokol, Inc., Brigham City, UT			4. PROJECT TITLE MPC.7000, Wastewater Treatment Plant		
5 PROGRAM MPAF P-1 Line Item #20		6 CATEGORY CODE 222-222	7. PROJECT NUMBER		8. PROJECT COST (\$000) \$855.
9 COST ESTIMATES					
ITEM		U/M	QUANTITY	UNIT COST	COST (\$000)
Wastewater Treatment Plant		L/S			\$855.
10. DESCRIPTION OF PROPOSED CONSTRUCTION					
<p>A treatment facility will be constructed to treat wastewater from AF Plant 78 operations generating waste HMX, ammonium perchlorate, organic solvents, and other propellant chemicals. This waste is currently hauled to the adjacent Morton-Thiokol property and placed in unlined impoundments and burned. The proposed facility will eliminate the current land disposal of the hazardous waste.</p> <p>This request is being made for design and construction for the following recommended treatment methods: (1) settling tanks to act as preliminary solid/liquid separators, (2) filtration systems to affect further separation, and (3) carbon adsorption columns to eliminate organic contaminants and the remaining insoluble materials.</p> <p><b>BASIS OF NEED:</b></p> <p>The existing arrangement will be unlawful after Nov 88. Treating waste water generated by AF Plant 78 on the premises is preferable to disposal on Morton-Thiokol property because Air Force liability would be limited. Further installing double liners in the existing impoundments is not feasible because of the need to burn an explosive mixture.</p>					